PATENT SPECIFICATION

DRAWINGS ATTACHED

844,359

Date of Application and filing Complete Specification: Feb. 26, 1959.

No. 6760/59.

Application made in United States of America on March 6, 1958.

Complete Specification Published: Aug. 10, 1960.

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CORRECTION OF CLERICAL ERROR

SPECIFICATION NO. 844,359

The following correction is in accordance with the Decision of the Assistant Comptroller acting for the Comptroller-General, dated the seventh day of February, 1961

Page 1, line 1, *after* "We" *for* "Rockcote Paint Company" *read* "Rockcote Paint Co."

THE PATENT OFFICE,
2nd March, 1961

DS 87462/1(3)/P.153 200 2/61 PL

panels, or separate strips of the colours fixed to panels are called "chips" throughout this specification and claims.

According to the present invention such a device comprises a support, a group of arms each having one end mounted on the support so that can pivot about an upright axis, the axes being spaced apart from each other, and a group of transparent panels each having a number of different colour chips fixed on it with a transparent area between adjacent colour chips, each panel being attached at its upper edge to a different one of the arms, and being supported on its associated arm so that it can rotate about an axis mid-way between the side edges of the panel and so that it can swing in any direction relative to the arm.

The panels are preferably attached to their arms by ball and socket joints. The arms may be arranged in two sets to extend in opposite directions from the support, with the arms in each set vertically offset from the other arms in that set to permit the arms to be swung across each other during comparison of the colour chips on different panels.

In a preferred construction, the pivotal axis of the two sets of arms are disposed in diverging rows on the support and the panels are attached to the arms at a uniform distance from their pivotal axes so that the panels will be staggered when the arms extend in opposite directions from the support.

A lamp may be mounted on the support to lie in front of the support and at a position

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device;

Figure 2 is a plan of the display device;

Figure 3 is a plan of part of the display device with certain of the transparent colour chip display panels disposed in position in which they overlap each other;

Figure 4 is an enlarged detail view illustrating the means for mounting the colour chip display panels on the support arms;

Figure 5 is a side elevation of the display device;

Figure 6 is an enlarged vertical section view on the line 6—6 of Figure 3 and illustrating the panels in different positions; and,

Figure 7 is a front elevation of part of the display device, illustrating the transparent colour chip display panels in another position.

In order to increase the number of different colours and shades of paint which can be offered for sale, without excessively increasing the dealers paint inventory, paint colouring systems have been developed to enable the dealer to reproduce a desired colour by adding selectively variable quantities of various different colourants to a base paint or paints. A very large number of different colours and shades can be produced by utilizing these paint colouring systems and some difficulty has been encountered in developing a device which will conveniently display an appreciable portion of these different colours and shades. The display device of the present invention is arranged to display a large number of different colours and shades and in such a manner as to enable the customer to compare the

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Index at acceptance:—Class 3(2), D1H.

International Classification:—A47f.

COMPLETE SPECIFICATION

Improvements relating to Display Devices

We, ROCKCOTE PAINT COMPANY, a corporation of the State of Illinois, United States of America, of 200 Sayre Street, Rockford, Illinois, United States of America, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to a device for displaying paint colours. The colours, which may be areas of the paints themselves applied to panels, or separate strips of the colours fixed to panels are called "chips" throughout this specification and claims.

According to the present invention such a device comprises a support, a group of arms each having one end mounted on the support so that can pivot about an upright axis, the axes being spaced apart from each other, and a group of transparent panels each having a number of different colour chips fixed on it with a transparent area between adjacent colour chips, each panel being attached at its upper edge to a different one of the arms, and being supported on its associated arm so that it can rotate about an axis mid-way between the side edges of the panel and so that it can swing in any direction relative to the arm.

The panels are preferably attached to their arms by ball and socket joints. The arms may be arranged in two sets to extend in opposite directions from the support, with the arms in each set vertically offset from the other arms in that set to permit the arms to be swung across each other during comparison of the colour chips on different panels.

In a preferred construction, the pivotal axis of the two sets of arms are disposed in diverging rows on the support and the panels are attached to the arms at a uniform distance from their pivotal axes so that the panels will be staggered when the arms extend in opposite directions from the support.

A lamp may be mounted on the support to lie in front of the support and at a position above the panels to illuminate the chips on the several transparent panels.

Colour cards corresponding to the colour chips on the panels may be mounted on the base of the display device in front of the support to facilitate reference between the colour chips on the panels and the corresponding colour card.

An example of a device constructed in accordance with the invention is illustrated in the accompanying drawings in which:—

Figure 1 is a front elevation of the display device;

Figure 2 is a plan of the display device;

Figure 3 is a plan of part of the display device with certain of the transparent colour chip display panels disposed in position in which they overlap each other;

Figure 4 is an enlarged detail view illustrating the means for mounting the colour chip display panels on the support arms;

Figure 5 is a side elevation of the display device;

Figure 6 is an enlarged vertical section view on the line 6—6 of Figure 3 and illustrating the panels in different positions; and,

Figure 7 is a front elevation of part of the display device, illustrating the transparent colour chip display panels in another position.

In order to increase the number of different colours and shades of paint which can be offered for sale, without excessively increasing the dealers paint inventory, paint colouring systems have been developed to enable the dealer to reproduce a desired colour by adding selectively variable quantities of various different colourants to a base paint or paints. A very large number of different colours and shades can be produced by utilizing these paint colouring systems and some difficulty has been encountered in developing a device which will conveniently display an appreciable portion of these different colours and shades. The display device of the present invention is arranged to display a large number of different colours and shades and in such a manner as to enable the customer to compare the

[*Price 3s. 6d.*]

various different colours on display.

The display device illustrated in the accompanying drawings is adapted to be mounted on a table or bench and includes a base 10 having a substantially horizontal shelf 11 along the forward portion thereof and a wall 12 which is inclined upwardly and rearwardly from the rear edge of the shelf. A horizontally extending top wall 13 extends rearwardly from the upper edge of the wall 12.

An upright support 16 is mounted on the base 10 adjacent the rear edge thereof and extends upwardly from the base 10. The support 16 is of V-shaped cross-section being formed by diverging walls 17 and 18. The walls 17 and 18 progressively increase in width from the bottom to the top as shown in Figures 1 and 5, so that the apex of the V-shaped section is inclined upwardly and forwardly. A V-shaped panel 19 is fixed to the upper end of the support 16.

The different colours to be displayed are applied to transparent panels herein shown twenty in number, it being understood that a greater or lesser number of panels may be utilized if desired. The panels are arranged in two sets and designated A1—A10 and B1—B10, the sets being disposed at opposite sides of the support 16. The colours to be displayed are mounted on the panels and may be either applied directly to the panels as small segregated coloured areas or may be applied to strips which are fixed to the panels. For convenience, the colours, whether applied directly to the panels or to strips attached to the panels are hereinafter referred to as colour chips and are designated by the letter X. The colour chips are arranged in spaced rows and columns on the panels and in a preselected sequence according to the colour and shade. As herein illustrated, the colour chips X are arranged in five columns crosswise of the panels and in twelve vertically separated rows, it being apparent that a greater or lesser number of chips may be applied to each panel, if desired. With the specific arrangement illustrated, a relatively large number of different colour chips, of the order of twelve hundred, are displayed in a conveniently accessible manner.

The transparent display panels A1—A10 are mounted one side of the support 16 by means of arms C1—C10 respectively. The panels can swing horizontally independently of each other and the other panels B1—B10 are mounted on the other side of the support by arms D1—D10 respectively. Each of the arms C1—C10 are vertically offset from each other, to enable any one arm to be swung cross-wise of the adjacent arms and the arms D1—D10 are similarly vertically offset from each other. The arms are advantageously made identical in construction to minimize the number of different parts which must be fabricated and each includes a vertically disposed pintle 25 on one end, a horizontally extending portion 26 and a depending portion 27 on the free end thereof. The pintles 25 on each of the arms are rotatably received in upwardly opening sockets which are formed in the support panel 19. The sockets for the arms C1—C10 and D1—D10 are respectively disposed in diverging rows, as is clearly shown in Figures 2 and 3, so that the free ends of the arms C1—C10 and D1—D10 project a progressively greater distance outwardly from the support, when the arms are arranged as shown in Figures 2 and 3 to extend in opposite directions from the support. The depending portions 27 on the arms in each of the sets C1—C10 and D1—D10 are thus laterally offset as is clearly shown in Figure 1.

The arms in each set are also vertically offset from each other to enable any one arm in the set to be swung across the other arms, as shown in Figure 3. As previously described, all the arms are preferably identical in construction and in order to effect vertical offsetting of the arms, the support panel 19 is inclined upwardly and rearwardly and the sockets or holes are made of uniform depth. With this arrangement, the arms in each set will have the horizontally extending portion 26 thereof disposed a uniform distance above the panel 19, at the point of attachment thereto, and since the panel is inclined upwardly, the horizontally extending portions of the arms will be vertically offset. Necessarily, the inclination of the panel 19 and the spacing between the adjacent holes is correlated so that the horizontally extending portions 26 of the arms will be vertically offset a distance at least sufficient to clear the adjacent arms. The length of each of the rows of holes is made less than the effective length of the horizontal portion 26 of the arms so that even the rearmost arms C10 and D10 can be swung to a position in which the depending portion 27 on the free end thereof is disposed forwardly of the support 16.

The transparent panels A1—A10 and B1—B10 are rotatably attached to the depending portions 27 on the arms C1—C10 and D1—D10 respectively. For this purpose, an enlarged head 31 (See Figure 4) is provided on the end of the depending portion 27 on each of the arms. A U-shaped clip 32 having an arched upper portion 32*a* and flat parallel end portions 32*b* is provided on each of the rods. An opening 33 is formed in each of the arched upper portions 32*a* of the clip for receiving the rod 27 and the clip is rotatably supported on the spherical head 31 for horizontal swinging movement and also for tilting movement relative to the respective arm. The upper edges of the panels A1—A10 and B1—B10 are fastened to the clips 32 by fasteners 36, the upper edges of the transparent panels being reinforced by a metal strip 35 which extends across the upper edge of the panels.

In order to enable display of a very large

number of colour chips X applied to the transparent panels are made quite small. Provision is made for enabling the customer to inspect a substantial area of each of the colours on the chips and for this purpose a number of stacks of colour cards, herein shown five in number, and designated E1—E5 are mounted on the base and coded with the colour chips X on the panels to enable rapid location of the colour card corresponding to any preselected colour chip X on the transparent panels. The cards E1—E5 are firmly supported on the shelf 11 and are attached to the base 10 by arched wire brackets 38. As is apparent from Figure 5, the arched wire brackets are disposed in a plane which extends transverse to the shelf 11 and have one end thereof attached to the shelf and the other end attached to the upwardly and rearwardly inclined wall 12 to enable swinging of the cards either singly or in groups from a position supported on the shelf 11 to a position supported on the upwardly and rearwardly inclined wall 12. Preferably, the cards E1—E5 have the lower face thereof coloured so that when they rest upon the shelf 11 the coloured face is disposed downwardly and when the cards are swung to a position on the inclined wall 12, the coloured face is disposed upwardly.

A lamp 41 is provided for illuminating the colour chips on the transparent panels and for also illuminating the colour cards E1—E5 supported on the base. As shown, the lamp 41 extends across the display device and is mounted in a position above the transparent panels and also forwardly thereof so as to enable both the colour chips on the transparent panels and also the colour cards to be illuminated. The lamp 41 is supported on arched tubular brackets 42 which are attached to the support panel 19 at a point behind the support arms C1—C10 and D1—D10 so as to not interfere with swinging movement thereof. Advantageously, the lamp 41 may contain several different coloured bulbs to simulate different lighting conditions such as natural light, incandescent light, or the bluish light produced by some fluorescent lights. In this manner, the appearance of the different colours under the particular lighting conditions in the room to which they are to be applied, can be simulated.

From the foregoing it is apparent that the display device of the present invention enables of a very large number of different colour chips to be displayed in a convenient and readily accessible manner. The transparent panels are normally disposed in a position such as shown in Figures 1 and 2 and when it is desired to inspect the colour chips on one of the panels A2—A10 or B2—B10, it is only necessary to swing those panels in front of the selected panel forwardly to expose the desired panel to view. In this regard, it is to be noted that the arms in one set can be swung to a position at the opposite side of the support and the selected panel then moved to a position in front of the support to enable close inspection of the colour or of the colour coding at the rear side of each chip to take place.

Of greater importance, the panels are also so arranged as to enable the colour chips on different panels to be composed. Thus, as shown in Figure 3, the panels A1—A10 and B1—B10 can be swung to a position substantially perpendicular to their respective arms. Since the arms are each laterally offset as well as vertically offset, any desired pair of panels, whether in the same set or in different sets, can be readily compared by swinging the same to a position in front of the support 16. As shown in Figure 3, one arm O5 of one set and an arm D2 of the other set are swung to a position in front of the support to enable the colour chips on the panels A5 and B2 respectively to be compared. Since the transparent panels are rotatably supported on their respective arms, the transparent panels can be inclined or tilted as shown in Figure 7 to enable colour chips adjacent the lower portion of one panel to be compared with the colour chips adjacent the upper portion of the other panel.

WHAT WE CLAIM IS:—

1. A device for displaying paint colours, the device comprising a support, a group of arms each having one end mounted on the support so that it can pivot about an upright axis, the axes being spaced apart from each other, and a group of transparent panels each having a number of different colour chips fixed on it with a transparent area between adjacent colour chips, each panel being attached at its upper edge to a different one of the arms, and being supported on its associated arm so that it can rotate about an axis mid-way between the side edges of the panel and so that it can swing in any direction relative to the arm.

2. A device according to claim 1, in which each panel is attached to its associated arm by a ball and socket joint.

3. A device according to claim 1 or claim 2, in which the adjacent arms are vertically offset from each other to permit the arms to be swung across each other.

4. A device according to any one of claims 1 to 3, in which the points of attachment of the panels to the arms are laterally offset from each other in a row when the arms extend parallel to the front of the display device with the result that the panels are supported by the arms in stepped overlapping relation.

5. A device according to any one of the preceding claims, in which the arms are grouped into first and second sets the sets extending from opposite sides of the support, the pivotal axes of the first and second sets of arms being spaced apart from each other in rows extending from the front towards the rear of the support, the distance between the pivotal axis of each arm and the point of at-

tachment of the panel thereto being greater than the distance between the pivotal axis and the front of the support to permit any panel to be swung into a position in front of the support.

6. A device according to claim 5, in which the length of all the arms in the same and in which the rows of pivotal axes diverge towards the rear of the support.

7. A device according to claim 1, in which the support includes a triangular panel inclined upwardly and rearwardly and having a row of vertically extending sockets along each of two edges and in which the arms each have a pintle extending into one of the sockets.

8. A device according to any one of the preceding claims, including a lamp mounted on the support and located in front of the support and at a level above the panels to illuminate the panels.

9. A device according to any one of the preceding claims, including a base having a substantially horizontally disposed shelf extending along the front of the display device in front of the support, a wall inclined upwardly and rearwardly from the shelf, cards corresponding in colour to the chips on the panels disposed on said shelf, the cards being mounted on the base in such a way that they can swing from the shelf on to the inclined wall.

10. A device according to claim 1, constructed substantially as described with reference to the accompanying drawings.

For the Applicants,
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51 & 52 Chancery Lane, London, W.C.2.

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844,359 COMPLETE SPECIFICATION
3 SHEETS

This drawing is a reproduction of the Original on a reduced scale.
SHEET 1

Fig. 1

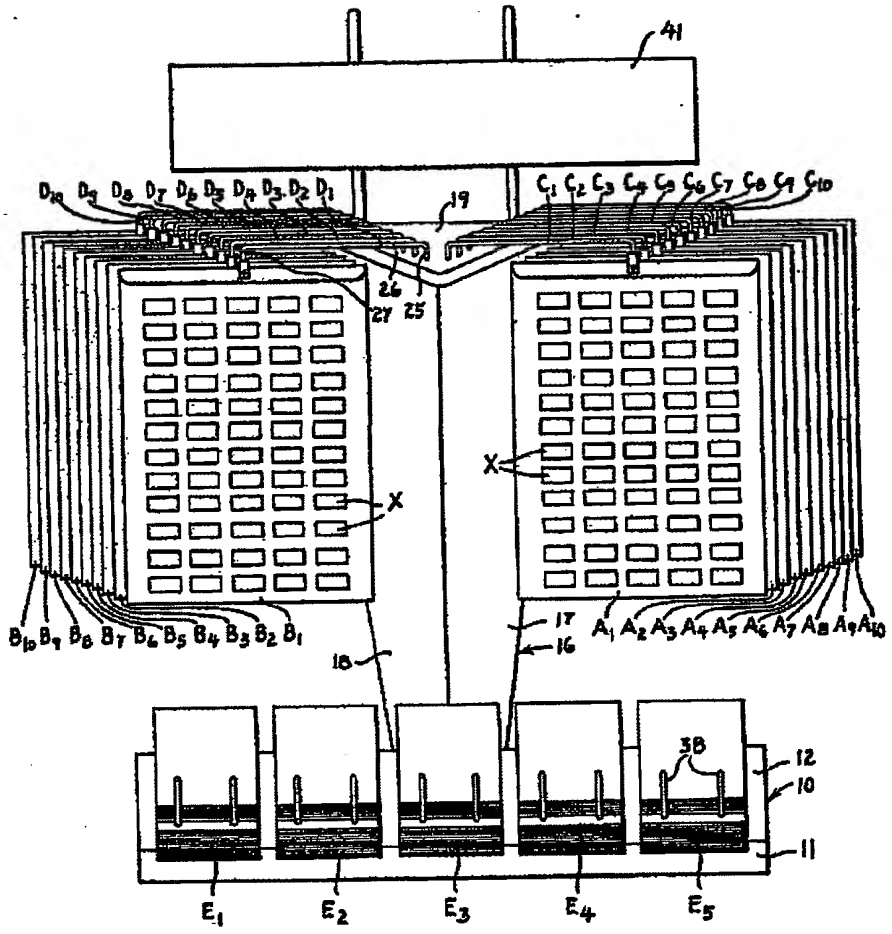
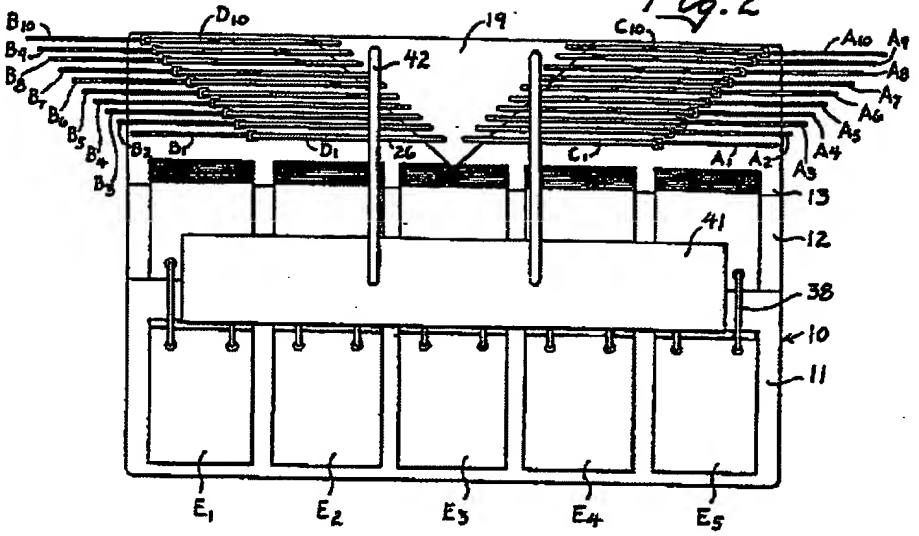


Fig. 2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B4
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A7
A6
A5
A4
A3
A2
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12
38
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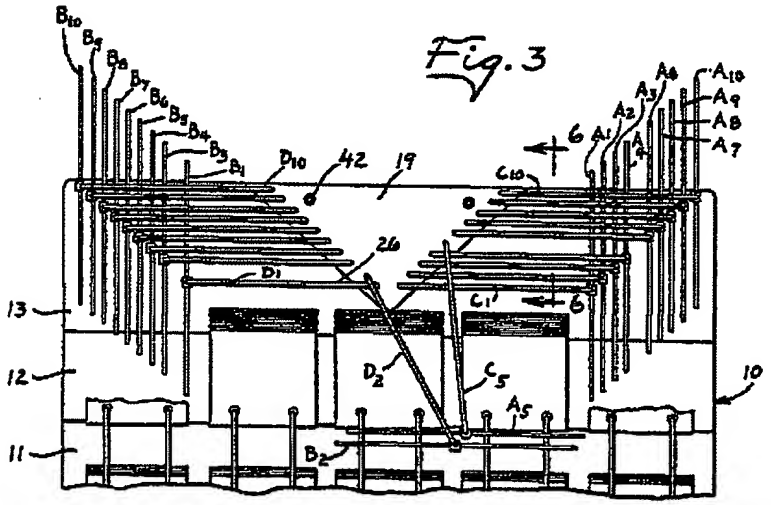
E1
E2
E3
E4
E5

Fig. 3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B4
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D10
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19
C10
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A3
A2
A1
A4
A10
A9
A8
A7
6
26
D1
C1
13
12
D2
C5
A5
10
11
B2

844,359 COMPLETE SPECIFICATION
3 SHEETS
This drawing is a reproduction of the Original on a reduced scale.
SHEETS 2 & 3

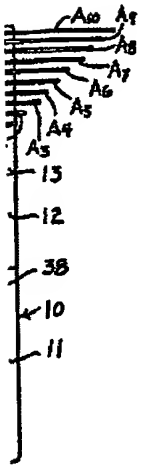


Fig. 4

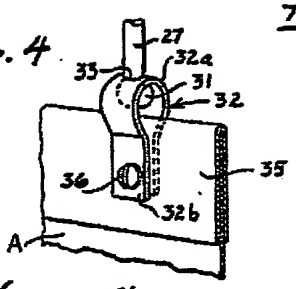


Fig. 5

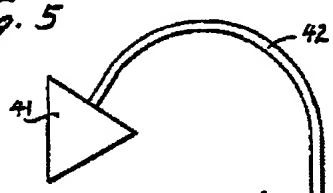


Fig. 6

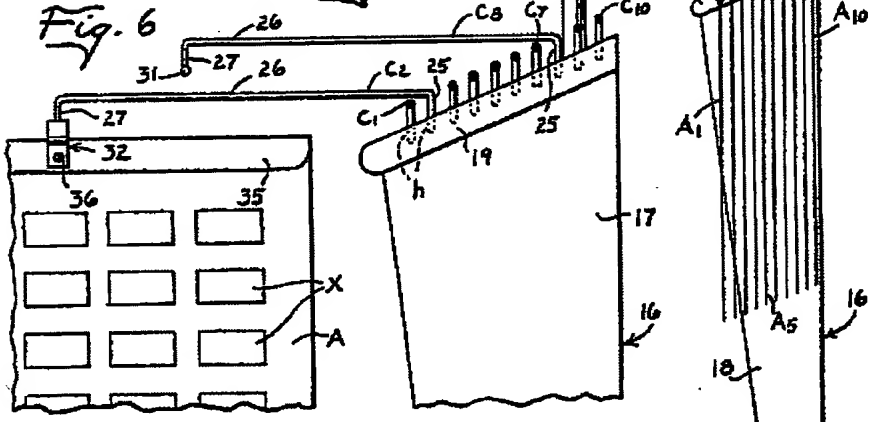
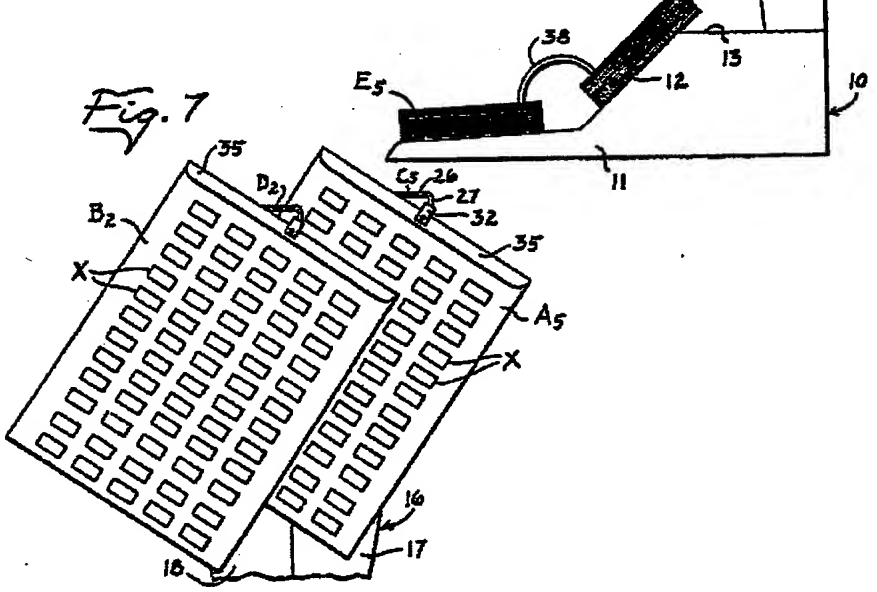


Fig. 7



844,359 COMPLETE SPECIFICATION
3 SHEETS This drawing is a reproduction of the Original on a reduced scale.
SHEETS 2 & 3

Fig. 2

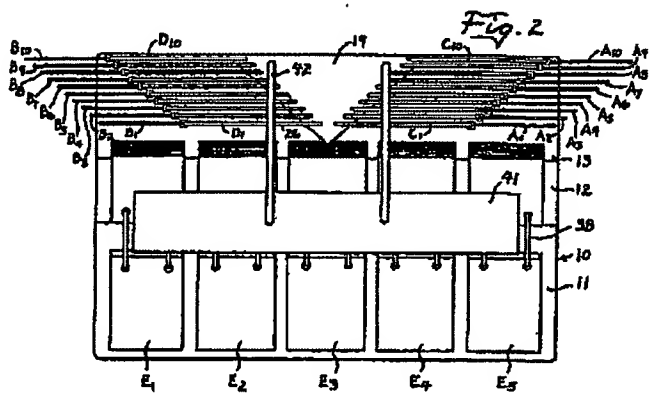


Fig. 3

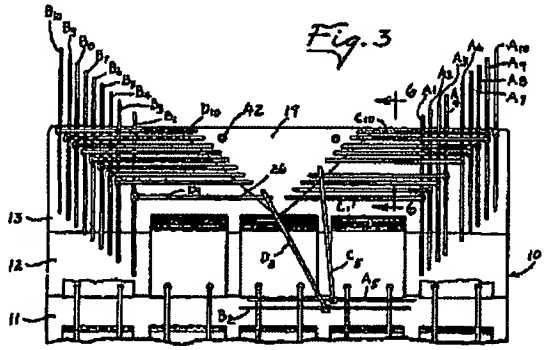


Fig. 4

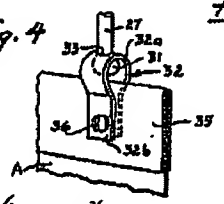


Fig. 5

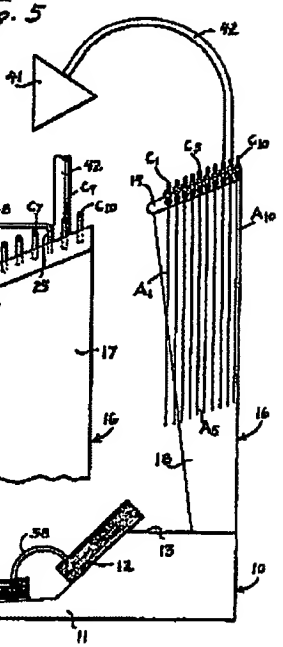


Fig. 6

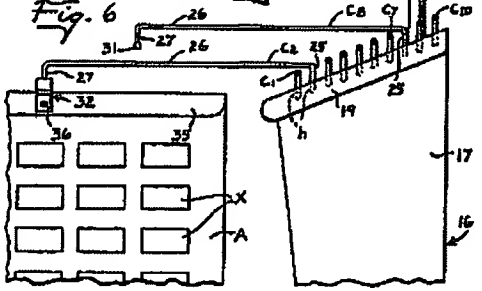


Fig. 7